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TI \*\*\*Preparation\*\*\* of \*\*\*polyester\*\*\* composite having good heat resistance, mechanical properties, toughness, processability, and appearances

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SO Jpn. Kokai Tokkyo Koho, 13 pp.

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DT Patent

LA Japanese

IC ICM \*\*\*C08L067-02\*\*\*

ICS \*\*\*C08G063-16\*\*\* ; \*\*\*C08K003-34\*\*\* ; \*\*\*C08K009-04\*\*\*

CC 37-6 (Plastics Manufacture and Processing)

AB Title composite contain cation-exchange-capable org. compd.-modified layered compds. highly dispersed in monolayer level in thermoplastic \*\*\*polyesters\*\*\*. Thus, 200 g \*\*\*montmorillonite\*\*\* (ion exchange capacity 1.2 mequiv/g) was dispersed in water, then 120 g 12-aminododecanoic acid hydrochloride was added, and stirred 2 h at 70.degree., filtered, and vacuum-dried. A mixt. of 10 g the above product and 1350 g 1,4-butanediol was heated 4 h at 80.degree. with irradiation of 40 kHz ultrasound, then esterified by adding 1250 g terephthalic acid and 0.8 g tetra-Bu titanate to obtain a \*\*\*poly\*\*\* ( \*\*\*butylene\*\*\* \*\*\*terephthalate\*\*\* ) composite which was injection molded at 80.degree. to give a test piece showing tensile yield strength 60 MPa, tensile elongation at break 145%, flexural yield strength 95 MPa, flexural modulus 2710 MPa, heat distortion temp. 91.degree. (18.6 kg/cm<sup>2</sup>), Izod impact strength 142 KJ/m<sup>2</sup>, and yellow color after dried heat test.

ST \*\*\*montmorillonite\*\*\* cation exchange \*\*\*polyester\*\*\* composite

IT Cation exchangers

Composites

Heat-resistant materials

Impregnation

Sound and Ultrasound

( \*\*\*prepn\*\*\* . of \*\*\*polyester\*\*\* composite having good heat resistance, mech. properties, toughness, processability, and appearances)

IT \*\*\*Polyesters\*\*\* , \*\*\*preparation\*\*\*

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

( \*\*\*prepn\*\*\* . of \*\*\*polyester\*\*\* composite having good heat resistance, mech. properties, toughness, processability, and appearances)

IT 38613-77-3

RL: MOA (Modifier or additive use); USES (Uses)

(hind phenol; \*\*\*prepn\*\*\* . of \*\*\*polyester\*\*\* composite having good heat resistance, mech. properties, toughness, processability, and appearances)

IT 24936-69-4P, Poly(1,4-cyclohexylene dimethylene terephthalate)

\*\*\*24968-12-5P\*\*\* , 1,4-Butanediol-dimethyl terephthalate copolymer, sru \*\*\*25037-99-4P\*\*\* , Poly(1,4-cyclohexylene dimethylene terephthalate) \*\*\*25038-59-9P\*\*\* ,

\*\*\*preparation\*\*\* \*\*\*26062-94-2P\*\*\* , 1,4-Butanediol-

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terephthalic acid copolymer \*\*\*30965-26-5P\*\*\*

1,4-Butanediol-dimethyl terephthalate copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

( \*\*\*prepn\*\*\* . of \*\*\*polyester\*\*\* composite having good heat resistance, mech. properties, toughness, processability, and appearances)

IT 107-64-2, Dimethyldioctadecyl ammonium chloride \*\*\*1318-93-0D\*\*\*

, \*\*\*Montmorillonite\*\*\* , aminododecanoic acid-modified

1319-41-1D, \*\*\*Saponite\*\*\* , aminododecanoic acid-modified

6683-19-8 \*\*\*12173-47-6D\*\*\* , \*\*\*Hectorite\*\*\*

((Mg<sub>2.67</sub>Li<sub>0.33</sub>)Si<sub>4</sub>Na<sub>0.33</sub>[F<sub>0.5-1</sub>(OH)<sub>0-0.5</sub>]2O<sub>10</sub>), aminododecanoic

acid-modified 22543-30-2D, 12-Aminododecanoic acid hydrochloride, reaction products with \*\*\*montmorillonite\*\*\* , \*\*\*hectorite\*\*\*

, or \*\*\*saponite\*\*\* 32130-27-1D, reaction products with \*\*\*montmorillonite\*\*\*

RL: MOA (Modifier or additive use); USES (Uses)

( \*\*\*prepn\*\*\* . of \*\*\*polyester\*\*\* composite having good heat resistance, mech. properties, toughness, processability, and appearances)